Site	**AOC 4-6.3 Evergreen Infiltration Range NE**
Step 1 - State the Problem	In order to determine if a release has occurred, the extent of the potential contamination, and whether it presents a risk to human health and the environment, data regarding the soil quality are needed.
Step 2 - Identify the Decision	Determine nature and extent of contaminated soils in the former rifle range, and whether the remaining surface soils contain concentrations of metals (lead, arsenic, and copper) that exceed MTCA A action levels require the site to be moved to the next phase which would include risk analysis and/or remediation or show defensible data that contamination no longer exists at the site.
Step 3 - Identify the Inputs to the Decision	The inputs to the decision include data collection, maps & plans, site drawings, real property information, and site-specific risk assessments. New data collection, specifically the COPC soil concentrations found at each site, will be the main decision drivers as to whether a site is moved to the next phase of work (risk-analysis and/or remediation) or is clean-closed according to WA Ecology regulations. The new data collected will be in the form of real-time field FPXRF data and fixed-laboratory soil conformational sample results. Other inputs to the decision will be considered during the next phase of work.
Step 4 - Define the Boundaries of the Study	The population of interest has been identified as lead contaminated soil at the former rifle range. The spatial boundaries of the decision statement are initially at the sample locations and will extend as necessary to the edge of each site in the category. The samples taken will be a census of the population of interest. The decision unit is selected on the basis of regulations and the agreement reached between DPW, WADOE and USACE. Heavy vegetation may present potential obstacles regarding access, personnel, time, or equipment. The vertical boundary of this site is determinant upon remediation levels, as based on consideration of direct contact risk by humans or ecological receptors. The horizontal boundaries are initially limited to the edge of the range as defined by the berms. Samples may be collected outside of the range if field analysis suggests that contamination exists beyond the boundary of the range.

Step 5 - Develop a Decision Rule	Field-screened sample concentrations from the initial sample locations are compared to MTCA A values. If the concentrations exceed project-specified levels, then the need for additional samples will be determined based on the criteria outlined in Step 7.
Step 6 - Specify Tolerable Limits on Decision Errors	The null hypothesis is that the site soils contain concentrations above the action level. The most severe error would be if the site soils were determined to be clean when they are contaminated (false positive). Maximum type I (alpha) error rate of 10% is permitted (that is, site is determined to be clean when it is in fact dirty); maximum type II error (beta) error rate of 20% is permitted (site is determined to be dirty when it is in fact clean). The action level is 250 mg/kg; the width of the “gray zone” of tolerable error is 50 mg/kg (20% of the action level). Analytical Error: Laboratory detection limits for the COPCs shall meet MTCA screening criteria. Accuracy and precision control limits for analytical data will be in accordance with the Draft RIWP.

Step 7 - Optimize the Design	Field screening will be done with XRF technology. Initially soil samples will be collected from the area expected to contain contamination. The results of the field screening will determine the need to step out laterally and how deep to take the subsequent samples until all samples have concentrations below the screening criteria or the site boundaries have been reached. A systematic sampling grid will determine sample positions and locate 'hotspots'. Sample locations with contamination detected from field tests will be stepped out laterally until field-screening values are below the analytes' criteria. Samples will be collected at one-foot intervals to maximum depth dependant upon concentration of COPCs. The soil sample depth is based on the maximum depth required to address direct contact risks. The analytical methodology will be in accordance with the draft RIWP. The worst-case sample from either or both screening methods will be sent for laboratory analysis for whatever was detected. The first non-detect samples for either (or both) field screening method will be sent in for appropriate confirmatory analysis. Analytical methodology will be in accordance with the project QAPP in the draft SAP. Field duplicates and QA samples will also be collected for QC/QA purposes.

Site	AOC 4-6.3 Evergreen Infiltration Range NE
Potential Sources to the Environment	The potential source to the environment is soil contaminated with lead, arsenic, and copper from ammunition expended during operation of the former rifle range.
Potential Contaminated Media	The potential contaminated media are the soils impacted by past activities at the former rifle range. Groundwater is not considered a potential media at this time, as evidence does not suggest contamination.
Previous Sampling	No previous sampling has occurred at this site, therefore, data regarding potential contamination is not available.
Contaminants of Potential Concern (COPCs)	Lead, arsenic, and copper.
Exclusion of COPCs	None of the COPCs will be excluded from the above list unless a site has specific documentation for the exclusion that meet 2001 MTCA A rules for exclusion.
Future Site Use	This site is currently “zoned” for Administration; the potential for development on this is exists.
Potential Receptors	Potential human receptors are categorized into Construction/Utility Workers and Trespassers. There is a potential that animal or plant species could be impacted. A terrestrial ecological evaluation will identify species at potential risk.